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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/936,567 | 12/06/2001 | Karl-Heinz Staffa | 016906-0222 | 8696 |

7590 07/03/2003

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EXAMINER

LEO, LEONARD R

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 3743 | 8 |

DATE MAILED: 07/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | |
|------------------------------|-----------------|---------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/936,567 | STAFFA ET AL. |
| Examiner | Art Unit | |
| Leonard R. Leo | 3743 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

Reference to claims in the specification should be removed.

Appropriate correction is required.

Claim Objections

Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

The recitation of a "single soldering operation" in claim 6 does not further limit claim 1 reciting "slots are introduced into the header blank after the longitudinal gap is sealingly soldered or welded." Thus, tubes and fins are connected after the header blank is formed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Taylor. As permissibly gleaned from Figure 1, the ratio of D/2s is about 4.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Fink. As permissibly gleaned from Figure 3, the ratio of D/2s is about 3.

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In the rejections above, the functional recitation "for the insertion of a respective flat tube" has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language.

In re Fuller, 1929 C.D. 172; 388 O.G. 279. The recitation of "slots being introduced by punching with no inner die or by internal high-pressure forming" is considered to be a method limitation in an apparatus claim, which bears no patentable weight in this instance. See MPEP 2113.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor.

Taylor discloses all the claimed limitations except the specific material hardness.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to any material having desirable physical properties, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 2-3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fink.

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Fink discloses all the claimed limitations except the specific material hardness.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to any material having desirable physical properties, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 3 and 8, the specific ratio (D/D_1) is considered to be an obvious design choice, producing no new and/or unexpected results and solving no stated problem. As disclosed in the specification, the ratio values are a mere preference without any disclosed advantage, function or purpose. As such, it would have been obvious to one of ordinary skill in the art to employ any ratio (D/D_1) for the purpose of minimizing pressure drop.

Claims 4-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al in view of Buchanan et al.

Okada et al (Figures 7a-c) discloses all the claimed limitations except forming a header blank from a rolled sheet.

Buchanan et al discloses a method of manufacturing a heat exchanger comprising forming a header blank from a rolled sheet (Figure 1) for the purpose of ease of manufacture with respect to brazing.

Since Okada et al and Buchanan et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Buchanan et al would have been recognized in the pertinent art of Okada et al.

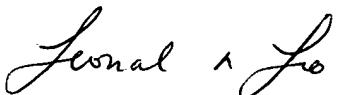
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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Okada et al forming the header blank from a rolled sheet for the purpose of ease of manufacture with respect to brazing as recognized by Buchanan et al.

Conclusion

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648. Status of the application may also be obtained from the Internet: <http://pair.uspto.gov/cgi-bin/final/home.pl>

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3743

June 30, 2003